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he Evolution of Native Culture in New Zealand: Moa Hunters, Morioris, Maoris.

y Roger S. Duff, M.A., Ethnologist, Canterbury Museum, Christchurch, N.Z. *Continued om Vol. 3, No. 10.*

Maoris.

The importance of isolating in New Zealand a native culture differing from the pre-uropean culture which is known as Maori is in the correction of the widely current local rror that Maoris and Maori culture have never changed, and were brought complete in every etail as Cook saw them, by the Fleet of 1350 or even by Toi.

This raises the question of what we mean by the term Maori. Why should Kupe be rmed a Maori if he was a Society Islands voyager of some 1,000 years ago who touched at ew Zealand in the course of exploring voyages and returned to his homeland? Every lander from the tropics did not become a Maori the moment he stepped ashore in New ealand. The culture which we know as Maori was undoubtedly the end product of a long eriod of local development, possibly not reaching its final perfection of form until after the isit of Tasman (A.D. 1642).

The adjective maori (lit. normal, ordinary or real) was apparently applied to distinguish ie Polynesian inhabitants of New Zealand from the intrusive European. Williams (1921) otes no literary use before 1850 of the term in its present sense. Dr. G. H. Scholefield (1945) uts its use back to 1840; McNab quoted by Shrimpton and Mulgan (1930), without the eference being cited, states that its earliest use was in 1818.

To what material culture then can we apply the term Maori? We can best apply it to iat found and described by Cook and the early voyagers in the late seventeen and early ghteen hundreds, particularly in the North Island. This implies that the New Zealand iaterial in museums and collections beyond New Zealand is wholly Maori, as is the great iajority of it in New Zealand museums.

Superficially, Maori material culture differs more sharply from the Polynesian norm than iat of any tropical group, and its peculiarities have commonly been explained in terms of a lelanesian migration. The need to provide a facile explanation of the alleged Melanesian ems doubtless explained the eagerness with which Best (1916) and Percy Smith (1915) ccepted the " Kauwae-raro " traditions of the Maruiwi, which they in turn misrepresented represent a Melanesian migration.

Best listed the following Maori culture items as not traceable to a Polynesian source: the terraced fort (*pa*); the *hoeroa* " weapon "; shaped stone discs or bowls, from the Bay of Plenty; the stone " reel " or bead; carved wooden coffins; wood-carving, painting and tattooing designs; cannibalism. It is not difficult to eliminate many of these. The stone " reel " has been explained as a copy of the Moa-hunter bone head, of Polynesian origin. The stone discs are best matched in Hawaii, but also in Mangaia, and in coconut shell, in Samoa. There is no real evidence that the *hoeroa* was a weapon. It is, as the name implies, a paddle and most closely resembles the dance paddles of Easter Island in preserving a vestigial face on its upper end and vestiges of the pierced ear lobes so characteristic of the Easter Island form.

The terraced fort and cannibalism may be dealt with together. Terraced and palisaded strong points were a remarkable feature of the North Island landscape. Readily matching the Maori *pa* at Fiji, Best favoured the theory of a western Melanesian migration to explain its presence in New Zealand. He might well have pondered over its absence in the Chathams, as a section of his Melanesian immigrants were supposed to have largely given rise to the Morioris. Its complete absence among the Morioris and virtual absence in the South Island suggests to me that the earliest New Zealanders were not addicted to warfare, as I regard these areas as generally a truer echo of early New Zealand than the North. Warfare would arise from the succession of migrations fetching up on the North Island, and not necessarily from the interaction of migrations from different areas of Oceania. Two hundred year intervals between successive migrations from any one Hawaiki would be sufficient to have blunted most feelings of kinship. Forts would be a natural development of warfare, and their presence in Rapa and the Marquesas, as well as Fiji and Tonga, suggests that their origin is ancient and generalized. Although only the Marquesans were such inveterate cannibals as the Maoris, the traditions of most Polynesians reveal potential cannibalism. Maori forts, warfare and cannibalism may thus be regarded as a local development of a generalized Polynesian inheritance.

To continue Best's list, the Melanesian origin of the northern " bone-boxes " may be rejected, as the use of containers for the heads and bones of the dead is less Melanesian than Oceanic, Marquesans and Morioris being Polynesian users of such receptacles.

Turning now to decorative art, to complete Best's list, Maori art is unique in Polynesia in being completely curvilinear, while sharing the running double-spiral design (*puhoro*) with south-eastern New Guinea and the Sepik River. In addition to Best, its Melanesian affinities have been stressed by a formidable array of students including Haddon. It is possible to concede Maori art a Melanesian affinity without according it a Melanesian origin. In the first place while volutes and curvilinear designs are more widespread in Melanesian than in Polynesian art, the Maori *puhoro* design is as rare in Melanesia as in Polynesia, occurring only in the Massim and Sepik areas of New Guinea. From the Sepik area, the *puhoro* design is illustrated through and by patternization of the crocodile and from Massim, as is widely known, through and by the heads of frigate birds. In New Zealand, the design is essentially, independent of nature forms, although Archey (1933) has claimed to derive the double spiral proper from the interlocking heads of the bird-headed Manaia. I cannot agree with Archey that a decorative design so complicated and distinctive could have arisen by independent evolution in New Zealand and New Guinea, which are closely adjacent points in the Oceanic

area, and, with Skinner (1924), I regard this and other parallels as derivations from a once widespread Oceanic tradition of decorative art. I would argue that Massim and Sepik artists expressed an already established *puhoro* pattern through natural forms, rather than that through counterbalancing natural forms they discovered the *puhoro*. The common possession of the pattern must date back at least to Indonesia, whence it was carried far to the east by the proto-Polynesians, and probably also to New Guinea and Melanesia. Its survival in New Zealand and disappearance in tropical Polynesia can be attributed to certain factors encouraging the retention and elaboration of the prototype Polynesian art in the former, and its degeneration in the latter.

One of these factors in the case of New Zealand is isolation, as first expressed by Skinner, although, in many respects, Maori culture appears to have retained fewer marginal Polynesian forms than its Moa-hunter and Moriori relatives. The other factor, stressed by Archey, was the abundance of easily worked timber in New Zealand. Elaborating Archey's theory a little further, the abundance of timber enabled the Maoris to develop plank built houses and storehouses, and also the large dug-out, built-up canoe, all of which provided scope for the retention and elaboration of the traditional art patterns and through which most of the Maori masterpieces were expressed. In tropical Polynesia, house and canoe architecture provided relatively little scope for artistic elaboration, which was relegated largely to clubs, spears and paddles on which there was less scope for the carver and decorator. In tropical Polynesia, the scene was set for degeneration into simpler, rectilinear motifs. It is noteworthy however that the rate of degeneration has been slower in marginal areas, particularly the Marquesas, but also in the Australs (High Island), Mangaia and Hawaii.

When we turn to the other motifs of Maori art, i.e. the double spiral proper, the " bird-headed man " (*manaia*), the lizard or possible crocodile and the " snake," with Skinner, I disagree with Archey that there is much likelihood of being able to ascribe them to a purely New Zealand origin. Archey has ingeniously endeavoured to derive the *manaia* from the normal human grotesque (*tiki*), the double spiral from patternized *manaia* mouths, the *puhoro* pattern in turn from the double spiral. He thus derives the most important Maori motifs from a human prototype. This does not explain to me the extraordinary coincidence that this purely local and independent development should have resulted in exactly the same motifs known *in toto* in Oceanic art, notably the bird or bird-man, in Melanesia and Easter Island,[4] the frigate bird, the snake, the crocodile, the *puhoro* pattern, and the double spiral, as in Melanesia and Indonesia.

Whether or not we admit only the human figure as the original motif, the opinion of New Zealand scholars regards the prototype Maori art as of immediately Polynesian origin, its development and elaboration as due to favourable environmental factors.

While the Maori Fleet undoubtedly comprised double and outrigger canoes, the large single sea-going or river canoe was the dominant North Island form at the time of Cook. The abandonment of the sister hull or outrigger would be partly due to the frequent needs of river transport (large rivers being unknown in tropical Polynesia) and partly to the existence of trees large enough to provide dug-out hulls up to 60 feet long, 8 feet wide, and 4 feet deep. Wide enough to be stable, these needed only the addition of top-sides in the form of long dressed planks to give them enough freeboard for sea travel. It is typical that double-canoes

[4] The bird-man cult of Easter Island is allegedly based on the straight-billed tern. Its artistic representation has, however, the down-curved bill of the frigate bird.

were largely confined to the South Island, cf. Tasman, Cook and d'Urville, while the only outrigger float known came from a cave at Sumner, Banks Peninsula.

In house form, as in canoes, the type evolved was in obvious response to local requirements, made necessary by the climate and possible by the abundant and suitable timber.

The raised store house (*pataka*), in form a plank built house on piles, reflects the enormous importance of the *kumara* in the North Island economy and the necessity to protect the crop from rats and weather.

The clothing of the Maori, as shown by Buck (1926), represents local evolution from Eastern Polynesian prototypes. Faced with the cold climate and the difficulty of growing the Paper Mulberry in any quantity, the immigrants had to make rapid adaptations of new materials, the leaf and leaf fibre of the native flax (*phormium*) being chiefly used. At first sight, a " woven " fabric and completely foreign to the simple textile techniques of Eastern Polynesia, the background fabric of the Maori cloak is seen to be an elaboration of the spaced single-pair twining techniques used to connect at the waist the fibre elements of the tropical kilt. The extreme development of the technique was the *taniko* border work. Cloaks in turn were elaborated by rows of leaf tags to shed rain, thrums of dyed fibre, feathers, dog skin strips to provide warmth and beauty, the technique of attachment being local and peculiar. In addition, kilts, related in technique to the cloaks, were always worn by women, men often going naked but for the cape. The *maro* is known in Maori traditions but in typical form had apparently passed into disuse. While strenuous, the Maori clothing adaptations were limited by the poverty of their cultural inheritance and did not evolve any form unknown in Polynesia, capes, kilts, and the maro being standard tropical garment forms. Little use was made of skins of birds and seals and without a proper weaving technique, garments composed of " finger-tied " flax fibre were never warm enough.

Maori weapons in no way favour the theory of a Melanesian origin. As in Polynesia, the bow and missile weapons do not occur and the standard weapons were spear proper (*tao*), spear-pointed quarterstaffs (*taiaha* and *pouwhenua*) a long handled striking club (*tewhatewha*), the ceremonial killing adze, various short clubs of the *patu* type in nephrite, stone, bone and wood. Maoris and Morioris undoubtedly specialized in weapons of the *patu* type but similar weapons in Easter Island, Ontong Java, Polynesian outpost east of the Solomons, and the Massim area, New Guinea (Skinner, 1931), suggest the retention in New Zealand of an ancient Oceanic form rather than a Melanesian or Western Polynesian migration.

Maori personal ornaments are unique in Polynesia and betray little evidence of a tropical origin. The reason is not far to seek as they are mainly rendered in nephrite, unknown in Polynesia and from its hardness imposing severe limitations on the forms possible in it. The *hei tiki* is clearly a nephrite rendering of the standard human grotesque of wood carving. The *hei matau* represents a Polynesian fish-hook form ; the *pekapeka* a bat or a double human grotesque ; the *koropepe* possibly the rare snake of wood carving. Each of these is typically a single breast pendant, nephrite not lending itself to necklace production, while a drilled nephrite adze or irregular fragment of the stone was also so used. Bird rings (*poria*) and the tooth of the mako shark were also rendered in nephrite and worn as ear pendants. Of nephrite ear pendants, the straight pendant form is obvious enough but the origin of the gracefully curved *tautau* is possibly from a whale tooth prototype. This and the ivory cloak pin seem to represent a memory of the whale tooth central necklace pendant of Moa-hunter

times as, more clearly, does the *rei puta* whale tooth ornament elaborated on its prototype by the indication of eyes and a face. Drilled human teeth, worn occasionally as necklaces, and shell imitations of human incisors appear to be definitely associated with Maori deposits, though suggestive of an older lineage. The decorative bone comb is a local version of the widespread Oceanic form. If Moa-hunters used the comb it was presumably of wood. The Morioris replaced it with a kite-shaped textile ornament studded with red parrakeet feathers. Tattooing was essentially part of Maori ornament and was, in keeping with Maori wood carving and rafter painting motifs, elaborate and boldly curvilinear. Men were tattooed on face and buttocks, women principally on their lips and chin. Maori ornament forms, if we regard the Moa-hunter necklaces as a fair echo of the Hawaiki prototypes, have moved sharply almost unrecognizable from their ancestral form. They reflect the value naturally placed on the rare and beautiful nephrite, suggesting incidentally the comparatively late date at which nephrite became intensively worked in New Zealand.

The form of the standard Maori stone adze is perhaps the strongest argument for a Western Polynesian or Melanesian contact. Virtually unknown in Eastern Polynesia, it is matched in Fiji, in Tonga and adjacent areas of Western Polynesia, the resemblance being often precise. Compared with Eastern adzes which are provided with a grip, often curved longitudinally, rarely completely ground, the Maori form is completely ground, completely without grip, outline often petaloid as in Melanesia, cross section rectangular, verging towards the double meniscus as in Melanesia. At first sight there is a strong temptation to solve the problem by presupposing a Melanesian migration which settled the North Island, to be later absorbed by Hawaiki migrations of Polynesians, while the South Island remained free from their influence. The adze type however is only Melanesian in the sense that it agrees with an important class of Fiji adzes, and Fiji has as many claims to be considered a Polynesian cultural outpost in Melanesia as *vice versa*. Furthermore Fiji and New Zealand are the only Polynesian outposts installed on older land formations, bearing a variety of coarse, resistant rocks, unknown elsewhere in Polynesia. These rocks were difficult to shape by flaking but demanded a tedious process of reduction by bruising and grinding. Niceties of form were consequently difficult to achieve, and the line of least resistance adopted independently by Maori adze makers and Fijian produced an identical result.

By this theory then, the resemblance between Maori and Fijian adzes may be attributed to a parallel development. The simplification of the Maori adze from its Eastern prototypes cannot be wholly ascribed to the influence of the newer stone materials. The human material concerned had also to be predisposed to change, for it is significant that the widespread existence of the same rocks in the South Island did not produce the same result. In the Chathams, on the other hand, the Maori form appears without the presence of diorites and other materials common in Maori renderings of the adze.

To sum up the characteristics of Maori culture : in those respects in which it differs from its Polynesian relatives, the differences can be ascribed to the effects of local evolution in the completely new and different environment of New Zealand.

The negative rôle of the environment is however seen in the failure of the Moa-hunters to react conspicuously to the same environment. Their conservatism has been suggested as due to their arrival as a single, homogeneous migration from Hawaiki when the isolation of the environment would outweigh its newness.

The motivating cause for the progressive adaptation of Maori culture to the new land may be suggested in terms of the hypothesis already noted that culture changes more rapidly in heart or central areas than in marginal outposts. The heart or central area of New Zealand

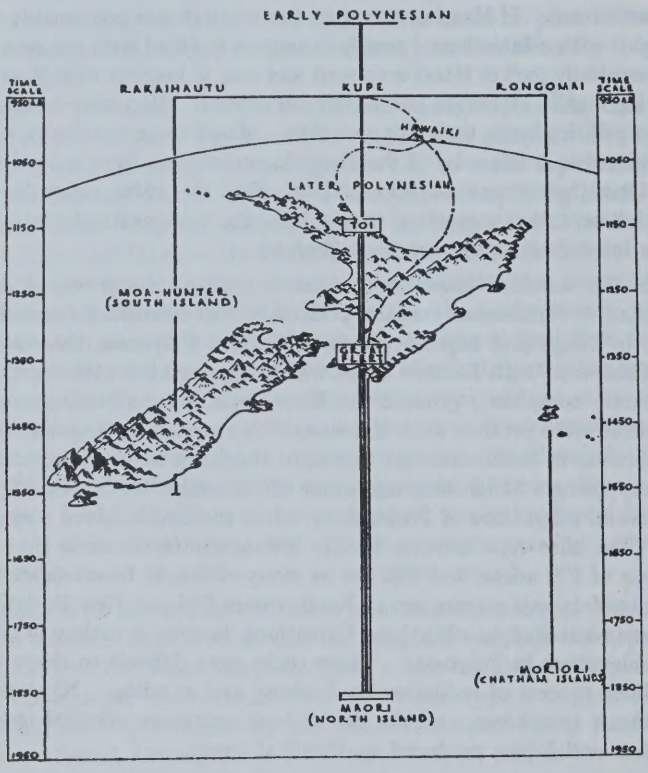

Figure 2.

is the major land mass of the North Island, the South Island and the Chathams marginal and isolated outposts. Except perhaps in the moa era, Polynesians never moved into these areas as of choice, and in these dead-ends or culs-de-sac throughout Polynesian occupation, this factor has favoured cultural survivals. Traces of the Moa-hunter culture types in North Auckland suggest that this area also served as a lesser cul-de-sac. If so, it would be the first marginal area to be occupied by the later evolution of Maori culture spreading concentrically from the heart area of the North Island. The chief quickening leaven in this sudden emergence of Maori culture would be the intercourse of a large and particularly a mixed population. This, every tradition indicates, the North Island could provide. Thus the Maruiwi, whether we regard them as Polynesian or Melanesian, landed on the Taranaki coast and spread from there. Toi and Whatonga made their landfall in the Bay of Plenty. The majority of the Fleet canoes fetched up on either the eastern or western seaboards of this portion of the North Island. In this area, which is not only the geographical centre of the land mass of

New Zealand but also the region where every migration to reach New Zealand left traces, all the conditions were fulfilled which had caused the tropical Hawaikis to generate and send forth successive culture ripples. These might be likened to the effects of throwing a great stone at the centre and this implies some force or disturbance which caused the stone to be thrown. In New Zealand, Maori and Moriori traditions confirm that the first settlers were without food-plants, so that the throwing of the last and greatest stone would shortly succeed the arrival of the Fleet migration with these plants in the fourteenth century. With this exception that they were bringers of crops, we cannot isolate the culture brought from the Eastern Hawaiki by the Fleet. While technically Later Polynesians, they did not succeed in making New Zealand culture conform to Later Polynesian standards. Rather they served as the final ingredient in feeding the doubtless already well established tendency to culture change in response to the local environment. Their cultural rôle in short was not to make Maoris more like Tahitians of that era, but less like Moa-hunters and Morioris.

The respective relationships of Moa-hunter, Moriori and Maori culture are suggested here in the evolutionary chart.[5] Here the North Island, South Island and the Chathams are shown in a deliberately distorted perspective to bring out the essentially remote position of the South Island and the Chathams, and to a lesser extent, the North Auckland peninsula. The single line represents the original Eastern Hawaiki culture reaching the North Island through Kupe, the South through Rakaihautu and the Chathams through Rongomai, all provisionally regarded as Early Polynesians of the tenth century. In the South Island, the line continues unbroken to about 1500, when I regard the Moa-hunter culture as having been overtaken by early Maori culture. For the Chathams the line continues unbroken down to the Maori invasion of 1835, although the probable cross migrations of the thirteenth century might have been included. In the North Island the line is soon broken by the arrival of Toi about 1150 and from this date to the Fleet arrival in 1350 probably broken continuously. The most important features of the North Island line are thus its progressive accumulation of collateral lines, and, after the Fleet, its 500 years of undisturbed local development, to culminate in what is here defined as Maori culture.

Maori Traditions.

Compared with the Chathams and the South Island, North Island family trees rarely reach back in an unbroken line through the forty or more generations New Zealand is believed to have been settled. Violent upsets in tribal *mana* consequent upon the arrival of Toi and the later Fleet are probably responsible for this, lines being apparently prudently truncated and pruned where necessary lest a person might reveal that his ancestors did not come in the Fleet!

So much confusion applies to the pre-Toi era that it is doubtful if these traditions should be taken into account. The earliest memory of a discovery is that Maui, apparently the well-known culture hero, fished up the North Island with a hook in the form of his grandmother's jawbone. Although the east coast Maoris of the North Island commonly claim this Maui as their ancestor, we need not regard the fable of Maui's discovery as applying to New Zealand.

Particularly since the publication of the "Kauwae-raro," Kupe has been considered the first historical discoverer of New Zealand. The date has been set by Percy Smith at A.D. 925

[5] See figure 2.

on the basis of the mean of one series of family trees, i.e. 39 generations prior to 1900. The greater number of Kupe lines however reached back about 24 generations, i.e. to A.D. 1300. These, together with frequent references to his conversation with Turi of the Aotea canoe, suggests that Kupe was a Fleet contemporary. Percy Smith rather feebly resolved this discrepancy by suggesting that there were two famous navigators and ancestors of the name of Kupe. Either of two other explanations would however appear more convincing. One is that the name of the discoverer of New Zealand had been forgotten and his deeds accredited to the memory of the Fleet ancestor Kupe ; the other that the only Kupe was the discoverer but that by truncated family trees he was brought down to the Fleet area.

There is also another obvious flaw in the Kupe legends, namely the statement that while he found no inhabitants in New Zealand and left none, place names commemorate his sojourn. We are asked to believe that he described New Zealand so minutely that voyagers leaving Hawaiki 400 years later were able to identify such spots as Kau-ara-Pawa, a point 15 miles up the Whanganui River where Kupe's servant Paua was drowned.

I think we can regard it as unlikely that the Polynesian discovery of New Zealand would not be immediately followed by its settlement and we can assume that this first settlement followed the arrival in New Zealand in the tenth century of a discoverer, whom we may call Kupe for want of a better name. In the South Island the apparently contemporary ancestor was Rakaihautu ; in the Chathams, Rongomai.

If we eliminate the " Kauwar-raro " traditions of the Maruiwi, the course of events would then be straightforward. The next and well established migration, about A.D. 1150 was that of Toi and Whatonga, the former remembered, by later generations blessed with the sweet potato, as the " eater of forest foods (*kai-rakau*)." During a further century, doubtless marked by further unrecorded arrivals, the vanguard of the Fleet migrations arrived in the person of Manaia of the Tokomaru canoe, and by the end of another century the main body of the Fleet had arrived. Contact with Polynesia then ceased and Maori history, like that of England after the Norman conquest, became the story of internal movements of the descendants of the various waves of migrants from abroad.

Returning to the Maruiwi, as Best preferred to call them, or the Mouriuri as favoured by Percy Smith, the weakness of the legends is that they are derived virtually from a single source ; are plausible, detailed and circumstantial in a period when most Maori legends are vague and shadowy ; and they were not published until an era when speculation on a Melanesian migration had displaced earlier views of the purely Polynesian origins of the Maoris.

These legends appeared in part 2, figuratively termed the " Lower Jaw (*Kauwae-raro*) " of the " Lore of the Whare-wananga " ; part 2, dealing with matters terrestrial ; part 1, the " *Kauwae-runga* " (Upper Jaw of Cranium), dealing with matters celestial. The series were introduced in the Journal of the Polynesian Society in 1912 and republished as Memoirs 3 and 4, dated 1913 and 1915 respectively. The original source of the great mass of valuable and interesting information in the Whare-wananga publications were two learned priests of the Ngati-Kahungunu of Wairarapa, Moihi te Matorohanga and Nepia Pohuhu, who were born and trained in the pre-Christian era. In the late eighteen fifties they were induced by their tribesmen to recount what they could recall of the traditional teaching, two younger men, H. T. Whatahoro, a part-European and Aporo Te Kumeroa being appointed scribes

Whatahoro became in fact the sole scribe, and over a number of years gradually built up from the two old Tohunga a formidable body of manuscript. Whether or not his informants avoided the pitfalls, it is clear that Whatahoro could not dissociate his story from facts known to him independently of traditional channels. Such was the knowledge brought back in the Maori invasion of the Chathams Island, which there is a good reason to believe had long been forgotten in Maori traditions. When the name of Hawaiki had generally been forgotten it is difficult to be convinced by a statement that Toi went on from Rarotonga to Pangopango, to Hamoa (Samoa), in spite of the Scribe's protests, about the year 1910, that he had not the slightest idea where such places were! The best way of describing the "Lower-Jaw," at least is to describe it as a Maori historian's compilation of facts traditionally handed down on Maori origins, orientated in the framework of contemporarily known historical and geographical facts. Already second-hand, the Whare-wananga information became third-hand when Percy Smith was allowed access to it and, as Editor of the Polynesian Journal, from time to time published his own extracts, translated, interpolated and generally rearranged by himself. Thus, while not one reference to the moa appears in the numerous places we might expect it in the "Lower Jaw," a full account of a Toi immigrant's encounter with moas was published independently in 1911, allegedly from information dictated to Whatahoro's father, Mr. J. M. Jury. The origin and circumstances of publication of the Whare-wananga memoirs have been bluntly criticized by H. W. Williams under the title of the "Maruiwi Myth."

The content of the traditions about the Maruiwi is generally credible, Whatahoro quoting Te Matorohanga as the source of this part of the "Lower-Jaw."

Subsequent to Kupe's departure and prior to the arrival of Toi, a large area of the North Island was settled by a people who did not come from the Maori Hawaiki, but from the improbable direction of the south-west. The sage was at some pains to indicate that these people differed somewhat from the Maoris in appearance, differences largely seized upon by Elsdon Best (1916) to denote a Melanesian migration and by Percy Smith (1915) to denote a "Polynesian people with a strong admixture of the Melanesian in them, probably much like the Niue Islanders and the Moriori of the Chathams Islands, but probably with more of the Melanesian in them." However, a study of the Maori text reveals little to justify even the milder Percy Smith interpretation. They were broad nosed (*ihu patiki*) although the bridge was narrow, with a somewhat darker skin "like *tutu* berries." They were tall, large-boned, with small calves (*ateate rere*) and knobby knees. They had flat faces and side-long glancing eyes. Most important of all they had straight (*torotika*) or flowing (*mahora*) hair. While harmless and general enough, a detailed description such as this does not ring true as a folk memory of times seven or eight centuries past. No language difficulty is mentioned in the intercourse of the Toi Polynesians with these earliest inhabitants. The most revealing remark about their culture is that their food comprised "forest products, fish of the ocean estuaries and fresh water, nothing more." Well established over the North Island by the time of the Toi arrivals, Maruiwi partly blended with the newcomers, the mixed Toi-Maruiwi tribes later harrying the independent Maruiwi until they were destroyed, but some survivors fled to Cook Strait and to the Chatham Islands. Matorohanga was positive that the Maruiwi did not reach the South Island.

The Maruiwi traditions remain quite inconclusive. I favour the interpretation that they were Early Polynesians and not Melanesians. There is insufficient evidence yet to

decide their point of origin, but they may have been a Western Polynesian stock. In this case their cultural influence is confined to Maori culture, in some degree to Moriori culture, but in Moa-hunter culture completely absent.

R. S. DUFF.

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Australia: Archæology. **McCarthy.**

Records of Rock Engravings in the Sydney District: XXXVIII. *By F. D. McCarthy, Dip.Anthr., Anthropologist, The Australian Museum, Sydney.*

GROUP 38. (Plate AD, Figs. 1-6).
THE PETER HOWE TRUST RESERVE.

The Peter Howe Trust is a sanctuary of seventeen acres thirty-three perches given to the State as a national monument by the late Mr. J. Featherstonhaugh Howe of Somersby for the preservation of a magnificent and unique group of Aboriginal rock engravings. The site, which formed portions of 18 and 81, parish Narara, County Northumberland, is situated on the eastern side of Grant's Road, approximately one and a half miles from the Somersby-Wiseman's Ferry road, and three-quarters of a mile west of Somersby Falls. It is also one and a half miles along Grant's Road to Mooney Mooney Creek. The late Mr. Howe generously offered this area to the State in 1941, and with the co-operation of the Society it was accepted and gazetted as the Peter Howe Trust Reserve No. 71027 (P. 43-6, 808) on the 18th February, 1944. At the donor's bequest the Society was made responsible for the Reserve, and Messrs. F. D. McCarthy, G. W. Watkins and E. H. Wright were appointed as Trustees.

The late Mr. Howe was a very old resident of Somersby, where he had a citrus orchard and poultry farm. He was born at Redfern, Sydney, on 5th July, 1878, and died on 2nd November, 1943. He is survived by a brother and two sisters, who still carry on the farm at Somersby. He was a generous, kind-hearted man, always ready to help others, but above

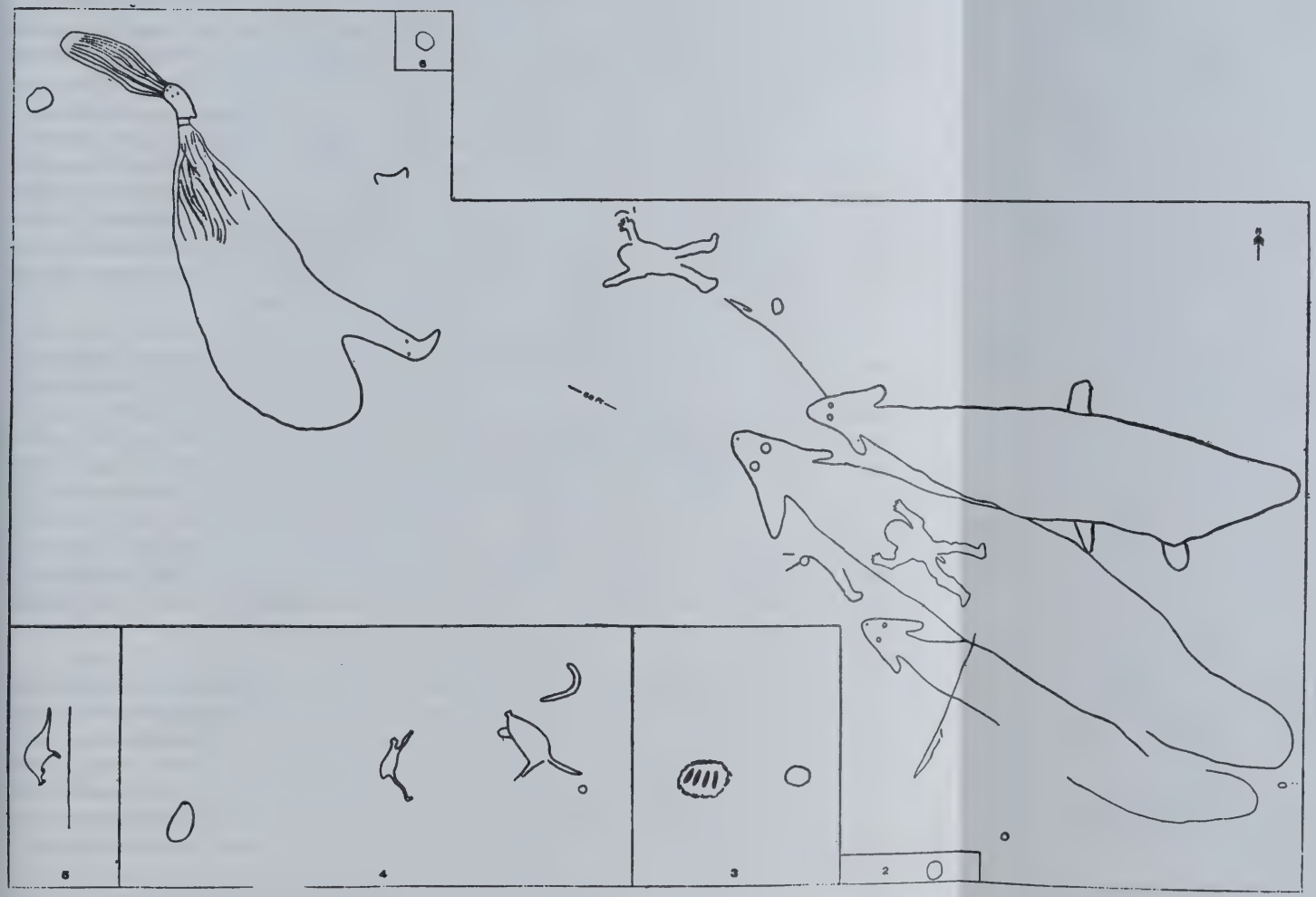

Plate AD, Figs. 1 to 6. Scale: 1 inch=6 feet.

all he loved the bushlands and the native fauna and flora. During his rambles in the Somersby area he found a number of groups of rock engravings and paintings previously unknown, and to these he led members of the Society on several enjoyable and instructive excursions. Mr. Howe was a keen advocate of the permanent preservation of these relics because he realized their great historical and scientific value, and his bequest is a practical expression of his endeavours in this direction ; it is also a relic of the past for which posterity will be grateful to Mr. Howe. He was a member of the Society from 1940 till his death.

Reserve. The Reserve is situated on the eastern side of a hill, and consists principally of extensive and more or less flat exposures of sandstone, broken only by islands of vegetation. These rock surfaces extend to the south and east of a rocky crag, on the southern side of the Reserve, from which an extensive view on all sides may be seen, including such prominent landmarks as Mount White to the south-west, Mount Kariong to the south, and Mount Boyne to the west. Between Grant's Road and these rock surfaces is a fine grove of large gum trees, the undergrowth having been cleared away, and in good seasons boronia, native roses, flannel and other wild flowers grow in profusion in various parts of the Reserve.

Engravings. The engravings are widely scattered about the acres of rock surface on the Reserve. The principal series (Plate AD, Fig. 1) is on the eastern side, where the exposures slope gently from west to east. This series, even from a glance at the illustrations at the small scale of eight feet to one inch, is impressive, and it is much more so when seen *in situ*. On the western side of the group is the massive figure of a one-legged culture-hero, 24 ft. in length, of a kind which I have termed the *Daramulan*-type.[1] He is depicted in profile with one leg, a neck bearing a broad necklet, no arms, a narrow head 2 ft. long with pointed chin, and a remarkable oval headdress 5 ft. 6 in. long bearing eight long roughly parallel stripes. For almost six feet down, his torso is decorated with a series of lines representing a cicatriced or painted pattern. He is facing the north-east in an alert pose as though looking at the other gigantic figures to the eastward. His eyes are shown in two pairs, although the face is in profile. On his leg are two small natural punctures. Behind his headdress is an oval figure 15 in. in length, and in front of him is a fish-tailed shape line.

The next series of figures lies in the middle of this huge rock surface, and 60 ft. from the culture-hero is a magnificent hunting composition. It consists of three large and elongate figures with cigar-shaped bodies 22 ft., 23 ft. 6 in. and 32 ft. 6 in. long respectively ; their lateral margins are partially conjoined, one has three fins and the other two none, and all possess a pointed head on which the ears and neck are shown. The eyes are circular pits up to 3 in. in diameter and 1 in. deep, and two of the figures have an additional small pit right on the end of the nose. Into two of these strange creatures spears have been driven by hunters standing in the usual animated upraised arms pose ; the fingers are shown on both hands of one man and on one hand of the other. The spear-thrower in each case is shown at the proximal end of the spear, one man is standing at the latter end of his spear and the other within the outline of the largest creature as though he had killed it. On the southern side of this group is the leg of a man finishing at a natural circle, a small *mundoe* or human foot-print is engraved below the spear, and others on the eastern and northern sides. An island of vegetation forms a crescent around the tails of the above creatures but trenches dug through it revealed no further engravings ; it is probable that it was there when the

[1] MANKIND, Vol. III, p. 161, pl. Q, fig. 1 ; p. 168, pl. R, fig. 10 ; p. 270, pl. Z, fig. 3.

group was engraved. There is a small circle, with conjoined punctured outline, ¾ of an inch wide and 3/16 deep, 60 ft. south of the above group.

There is an important difference in the technique of the outlines of these figures. The three large serpent-like creatures have smoothed and rubbed grooves up to 2 in. wide and ½ in deep. Those of the culture-hero series, and of the hunters and spears, man's leg and the three *mundoes* in the other series are from ½ in. to ¾ in. wide (although the punctures are only ½ in. in diameter), and up to ⅜ in. deep. There is a slight smoothing here and there in the latter series of outlines, but it is due to weathering agencies and not to rubbing by the Aborigines. In the culture-hero, however, appears a new and undescribed technique, which consists of smoothed holes, oval in shape, 1½ in. long, 1 in. wide, and ⅜ in. deep, made in parallel (laterally) series to form each line in the decoration of the neck. I propose to call this the " basin-technique," as opposed to the normal puncture or pit technique forming the outlines of most of the known engravings. This basin-technique, it might be noted, is known elsewhere, as for example on the two culture-heroes in the large group at North Maroota, again to show a decorative pattern (probably cicatrices) ; on an isolated and large figure of a kangaroo on the southern bank of Berowra Waters ; and in the outlines of a splendid kangaroo in an extensive group near the Pacific Highway at Somersby.

On the adjoining rock surface west of the culture-hero is a circle 16 in. in diameter, and 20 ft. away from it are four axe-grinding grooves (Fig. 3) in a shallow depression. Continuing westward about 200 ft. is another exposure sloping fairly steeply up to and around the southern and eastern side of the rocky crag, and on it are engraved five more figures (Fig. 4). They comprise a small circle (or *mundoe*), a poorly shaped wallaby 3 ft. long lacking its tail, a deeply curved boomerang 2 ft. 4 in. long, a small *Daramulan*-type figure 3 ft. 6 in. long, an oval figure 1 ft. long which might be a flat fish. This series is faint and weathered, with smooth outlines from 1 in. to 1½ in. wide. If the smoothness is due to rubbing, then these figures belong to the same period as the gigantic serpent-like figures in Fig. 1, but if it is due to weathering agencies they belong to the same period as the punctured figures in Fig. 1.

On another rock, almost one furlong north-west of Fig. 1, and near the western edge of the outcrops, is a delightfully portrayed wallaby 4 ft. long (Fig. 5) in a leaping pose, with a spear 6 ft. long directly below it. The outlines are lightly made with circular punctures from ¼ in. to ½ in. in diameter. There are just over sixty punctures in the spear, conjoined in parts but up to ½ in. apart at one end. I think that here is shown a wallaby and the spear which killed it, otherwise the line might represent a boundary of some kind. It is much more recent in age than Figs. 1-5 and probably has no relationship to the main story of the group.

Fig. 6 is another circle 1 ft. in diameter, on a large rock surface almost one furlong north-east of Fig. 1. Its outline is of conjoined punctures ¾ in. to 1 in. wide and 3/16 in. deep.

Interpretation. We can say without any doubt that this site is a ceremonial one of the highest importance, equalled in conception by few other groups in the Sydney-Hawkesbury district. Nowhere else are such gigantic creatures associated with a culture-hero, and the latter is one of the finest examples known of the *Daramulan*-type, with his unique head-dress and decorated body.

The three elongate creatures are undoubtedly a representation of the rainbow serpent. They are commonly referred to as dugongs or seals, but as they do not possess a bifurcated tail, and have well marked ears, these two identifications are eliminated. Campbell, in

Plate 24, figure 7, shows an excellent portrayal of a seal, but to date no figure of a dugong has been found unless the one shown in Campbell, Plate 20, figure 5, is one.

The evidence presented by Radcliffe-Brown[2] presents a clear picture of the significance and function of the rainbow serpent in Australian Aboriginal mythology. He stated that " this myth is a belief in a gigantic serpent which has its home in deep and permanent water-holes and represents the element of water which is of such vital importance to man in all parts of Australia. The serpent is often regarded as being visible to human eyes in the form of the rainbow. The Rainbow-Serpent as it appears in Australian belief may with some justification be described as occupying the position of a deity, and perhaps the most important Nature deity. . In some tribes it is the object of a definite cult either as part of the totemic cult or as part of the cult of the initiation ceremonies. In a considerable number of tribes it is the chief source or one of the chief sources of the magical powers possessed by the medicine-man. There's a very widespread association of quartz-crystals with the Rainbow-Serpent, and throughout Australia quartz-crystals are amongst the most important of the magical substances used by the medicine-men.

" The Rainbow-Serpent lives in deep permanent lagoons and waterholes. In the New England Tableland, it is particularly associated with waterfalls, possibly because at such places rainbows may frequently be seen . . . Throughout these tribes there is a belief that the Serpent will devour human beings who approach its home unless they are medicine-men. A man who had already obtained some magical powers would go into the pool inhabited by the expert.

" The most interesting point, however, is that a cult of the *karia* (Rainbow-Serpent) was often an element of the *Bora* or initiation ceremonies of the New South Wales tribes. Many of the sacred *Bora* grounds had a representation of the serpent in the form of a sinuous mound of earth up to forty feet[3] or more in length. In preparation for the ceremony the serpent was painted. A ceremony took place at the spot and the beliefs about the Rainbow-Serpent were explained to the younger men who were attending the initiation. The procedure was parallel to that relating to *Baiame*, the god of the initiation ceremonies, for at practically every *Bora* ground there was a representation in earth of *Baiame*, and frequently one of his wife, and at these figures ceremonies were performed and the myth related and expounded by the older men to the younger.

" Mrs. Parker's statements[4] concerning the Euahlayi would indicate that a representation of the *karia* was sometimes made elsewhere than on the sacred *Bora* ground and a ceremony performed in connection with it.

" Certain waterholes were taboo as bathing places. Some of these are inhabited by *karia* which swallow their victims whole.

" The *Myndie* of the Melbourne district[5] is a great snake-like creature, very large, very thick in the body, and very powerful. He is under the dominion of *Pundjel* (an All-father culture-hero). When *Pundjel* commands him, *Myndie* will destroy black people young or old. He can do nothing of himself. *Pundjel* must first order him. *Myndie* has several

[2] A. R. Radcliffe-Brown, " The Rainbow Serpent Myth of Australia," *J.R.A.I.*, LVI, 19-25, and " The Rainbow Serpent Myth in S.-E. Australia," *Oceania*, I, 342-347.
[3] Mathews recorded one 130 feet long outlined in the earth.
[4] L. Parker, *The Euahlayi Tribe*, pp. 95, 122, 1905.
[5] R. B. Smyth, *The Aborigines of Victoria*, I, p. 444, 1878.

little creatures of his own kind, which he sends out from time to time to carry diseases and afflictions to tribes who have not acted well in war or in peace. These little ones are very troublesome, but their visits are not so much dreaded as *Myndie* himself, who is very large, very powerful, and from whom no one escapes. When *Myndie* is known to be in any district, all the blacks run for their lives.

" *Nunnie brum brum* can arrest and put back the *Myndie* with a wave of his hand or a movement of his finger ; but no one knows his secret. No one can arrest *Myndie* but *Nunnie brum brum*. The latter is the local horde in whose territory is the chief home of the Rainbow-Serpent and therefore the men of this horde have power over it." For this reason Radcliffe-Brown claims that it may have been a local totem of the horde.

Parker[6] added that " *Mindi* . . . a mighty serpent . . . it is by his power that death is caused ; to exercise that power, for the destruction of their enemies, is the object of certain . . . ceremonies, and to appease his anger and avert his destructive influence was the purpose of other ceremonies, in which rude images, consisting of one large and two small figures, cut in bark and painted, were set up in a secluded spot ; the place was strictly tabooed ; the men, and afterwards the women, dressed in boughs, and having each a small wand with a tuft of feathers tied on it, were made to dance in single file and in a very sinuous course, towards the spot, and after going round it several times, to approach the main figure and touch it reverentially with the wand."

Radcliffe-Brown further remarks that the " Rainbow-Serpent is not confined to any particular ethnological province, but is very widespread and may very possibly be practically universal. In other words, it is characteristic of Australian culture as a whole, but not of any one part or stratum of it. It has also served to define the more essential element or motives of the myth. The fundamental motive would seem to be a conception of the rainbow as a huge serpent. The association of the serpent with rain and rain-making follows immediately from this central core. The conception of the serpent as living in certain deep permanent waterholes is easy to understand in a country in which so many of the waterholes dry up in seasons of drought. Those few places in which the water entirely disappears may quite justifiably be regarded as being the permanent dwelling-place of the spirit of water as represented by the Rainbow-Serpent."

Mathews,[7] speaking of the Wiradjuri tribe of southern New South Wales, said that they regard the " *Wawi* " as a serpent-like creature who lives in deep waterholes and burrows into the bank, where he makes his den. He has a wife and children who camp close to him, but in a different place. A " doctor " or clever man can go and see the *Wawi*, but must not go near his family. When a man is going on a visit to this monster he must paint his body all over with red ochre. He then follows after the rainbow. Some day when there is a thunder-shower, the end of the rainbow rests over the waterhole in which is the *Wawi's* abode. The man dives under the bank, where he finds the *Wawi*, who conducts him into his den and sings him a new song for his corroboree. The *Wawi* has the magical power of varying his size from a few inches up to prodigious proportions. The Black Streak in the Milky Way, towards the Southern Cross, is one of the ancestors of the *Wawi*. He encourages snakes and adders to bite the black people.

[6] E. Parker, *The Aborigines of Australia*, p. 24, 1854.
[7] R. H. Mathews, *Ethnological Notes on the Aboriginal Tribes of N.S.W. and Victoria*, p. 162, 1905

Mathews[8] recorded that "*Gu-ru-gnaty* is the name of an aquatic monster among the Thurrawal and Gundungurra tribes (whose territory extends from the coast south of Botany Bay inland and south-eastward across the mountains). He resides in deep waterholes, and would drown and eat strange blacks but would not harm his own people. He usually climbed a tree near the water, from which he kept a look out. If he saw a stranger approaching he slid down and dived into the water, without making a splash, or leaving any ripples on the surface. As soon as the individual began to drink, he was caught by *Gu-ru-gnaty*."

A feature of the various myths about the Rainbow-Serpent in New South Wales is that in escaping from an enemy it carved water-courses. Thus in a long myth of the Gundungurra tribe in the southern Blue Mountains recorded by Mathews[9] it says that Gurangatch (the Rainbow-Serpent) when pursued by Mirragan the Tiger-cat warrior, made the Wollondilly, Kedumba and other valleys. Mathews and Harvey[10] also mention this monster making and extending the Barwon-Darling-Murray River channels in escaping from relentless hunters. Various other myths demonstrate that the Rainbow-Serpent in various guises was responsible for the formation of most of our great rivers.

During the ceremonies the representation of the Rainbow-Serpent was usually painted. On the Bloomfield River, Queensland, it had a red head and many-coloured body. Mrs. Parker[11] recorded that sometimes there is a huge imitation of an alligator made of logs plastered over with earth and painted in stripes of different colours, a piece of wood cut open stuck in at one end as a gaping mouth; this alligator corroboree is generally indicative of a Boorah, or initiation ceremony being near at hand, among the Euahlayi tribe. It is thus probable that the engraved figures of this mythical creature at the Peter Howe Trust were also painted for ceremonies.

Interpretation of Peter Howe Trust Group. The actual meaning and function of this remarkable group is difficult to estimate, although its general significance is clearly indicated by the evidence given above. The most probable interpretation is that *Daramulan*, the culture-hero, is for some reason directing the two men to kill the Rainbow-Serpents, which are under his control. The group was probably a totem-centre of the local horde, and part of the *Bora* initiation ground, which would incorporate other sites, used by their tribe in this district. On the other hand, ceremonies quite unconnected with the *Bora* might also have been performed there. It should be borne in mind that the abode of these Rainbow-Serpents was undoubtedly in the pools below Somersby Falls, only three-quarters of a mile away.

It might be mentioned that in another large group of engravings some three miles eastward, near the Pacific Highway, occur two more Rainbow-Serpents, 10 ft. and 12 ft. long, associated with a man (a medicine-man or sorcerer), wallabies, goanna, and a fish. Then along the old Penang Mountain Road, in another large group, are three narrow examples engraved head to tail in single file, two of which are 7 ft. and one 8 ft. long. The latter examples raise the question of whether or not the figures commonly regarded as eels among the engravings are small Rainbow-Serpents, such as those used by the *Mindi* to punish enemies and those who did not observe traditional modes of behaviour, and whether eels

[8] R. H. Mathews, *op. cit.*, p. 143.
[9] R. H. Mathews, "Some Mythology of the Gundungurra Tribe, N.S.W.," *Zeitschrift f. Ethnologie*, XL, pp. 203-206, 1908.
[10] A. Harvey, "Fishing Legend of Jaralde Tribe, S.A.," MANKIND, III, pp. 108-112.
[11] L. Parker, *op. cit.*, p. 122.

were regarded as such emissaries by the natives. This matter is of some importance because a glance at Campbell's plates reveals more than fifty of these small elongate and eared creatures, and many more are known, from one to six feet long; some have a series of transverse lines across their body and a few possess eyes, but only a small number are identical in shape with the gigantic Rainbow-Serpents at Somersby. It is probable that their function varied with that of the groups in which they occur. The natives could draw eels of an unrecognizable nature as shown by the one in Campbell, Plate II, figure 7, in lateral profile with its well-toothed mouth open, but it is the only one known of this type.

Another interesting point about the Somersby engravings is the possibility that in the area from Brisbane Water to the Peter Howe Trust Reserve there exists a series of groups of engravings (all recorded but as yet unpublished) which appear to form part of a sacred *Bora* track and initiation ground.

Added importance is given to the Peter Howe Trust group by reason of the fact that Rainbow-Serpents as gigantic as those at Somersby are unknown elsewhere within the range of this kind of rock engraving, excepting one figure 30 ft. long high above one of the upper reaches of the Hawkesbury River. These engravings thus form the only tangible record of the existence of this belief in the Sydney-Hawkesbury district. Science and the nation, therefore, are greatly indebted to the late Mr. Howe for the opportunity of preserving such a unique record of aboriginal beliefs.

Gigantic Rainbow-Serpents were made in the earth, and built up of earth and logs, in association with the large culture-heroes, on the *Bora* initiation grounds elsewhere in New South Wales, as Mathews has shown in a number of his papers on these cults. Then, in the Kimberleys of north-western Australia, they are painted in series on the walls of huge rock-shelters, sometimes with huge culture-heroes, as shown in Radcliffe-Brown's plate.[12] The manner of depicting them, therefore, varies greatly in different parts of the continent.

F. D. McCarthy.

[12] A. R. Radcliffe-Brown, *J.R.A.I.*, LVI, Plate 1.

Melanesia: Social Anthropology. **Bell.**

The Narrative in Tanga. *By F. L. S. Bell. Continued from Vol. III, No. 3.*

Legends.

As pointed out above,[1] the *legend*, as a narrative form, is as distinct from the *popular tale* as the *myth* differs from either. Legends are based on semi-historical data handed down within the clan and refer to deeds of daring by ancestral relatives. The incidents related in such legends are believed to have happened and in many cases evidence of their truth is substantiated by reference to certain peculiar features of the landscape. They comprise the lore of the people and their recital, unlike that of the popular tales, is not regarded as an entertainment.

The first legend which I propose to relate concerns a type of being called a *gesges*. Although having superhuman powers, such as ability to obtain betel-nut in a season when the areca palms are not bearing or to move swiftly and without effort from one part of the island to another, a *gesges* is not believed to be a spiritual being in the same sense as a *kinit* or a *fiu*[2] is so regarded. He or she has his or her origin in the death of a woman well advanced in her pregnancy. The natives believe that whilst the soul of the woman departs for the land of the dead, the living child within her is born in the grave and makes its way underground to a large cavern called Li Na Fa:m (lit. cave/concerned with/the cliffs). Here it rapidly reaches maturity and emerges as a real man or woman.[3] My informant emphasized the essential " humanity " of the being by pointing out that it was visible as other men[4] and had clan affiliations as other men. The distinguishing characteristic of a *gesges* is his insatiable pursuit of sexual satisfaction. He is always described as a perfectly formed creature, according to Tangan standards of beauty, who may be easily identified by the strong smelling aphrodisiacs with which his comely body is anointed.

At the request of a young man who had been absent from Tanga for almost six years, Sulufkorofe gave the crew[5] of a canoe, assembled around the fire in the men's house, his version of the legend concerning Buti and the Gesges.

> Several years ago, a married woman named Buti, past her prime but not yet entitled to be called " old," paid a visit one morning, before dawn, to a secluded part of the jungle. Here she performed a love rite, in which she invoked the aid of her ancestors. She then returned home to Lop.[6] In the meantime, her husband, by name Siwomberber, had gone off to his gardens at Lufunfat. He was unhappy, as were all men who lived in the western end of the island of Boieng, because he had no betel-nut to chew. Not even the small and unsavoury type of areca nut was available.

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[1] See Mankind, Vol. III, p. 58.

[2] A *kinit* is the ancestral spirit of a man or a woman who has died a normal death, whilst a *fiu* is the ghost of one who has suffered a violent death. See Bell, F. L. S., " Report on Field Work in Tanga," *Oceania*, Vol. IV, pp. 303-304.

[3] The majority of legends concerning *gesges* identify it as a male being but it is not exclusively so. However, for the purpose of this article I shall refer to it henceforth as a male.

[4] Except on rare occasions, both *fiu* and *kinit* are not visible to the living.

[5] The ethnographer had been invited to accompany these men on a canoe trip to the island of Tefa, lying about ten miles south-south-west of Boieng. Owing to rough weather and unfavourable winds the trip had been postponed and the crew had assembled in the adjacent men's house to await a break in the weather.

[6] See the map on page 293 of my " Report on Field Work in Tanga," *Oceania*, Vol. IV, for this and other place names in this article.

Later the same morning, Buti made a second visit to the jungle where she again called upon her ancestors for assistance in finding a lover or lovers. No sooner had she finished her whispered incantation than she saw approaching her a young man of exceeding beauty who held in his hands two large, yellow betel-nuts. He said to her: "Do not be afraid! Do not shake so! I am no Tara![7] I am not Madas! I am a man as all men are. I belong to *fun fasambo*[8] and my mother died before I was born. I came up out of the ground at Matambec." He then gave her the two nuts and went upon his way. Buti returned home and hid the nuts from her husband.

The next day, she was gathering wild spinach in the jungle when the same young man again appeared before her. He threw her two more big betel-nuts which Buti caught in her cupped hands. On examining the nuts, she saw that they bore the marks of finger nails, thus giving proof of their owner's essentially "human" nature. However, the very fact that this man was in possession of such perfect specimens of the areca nut when all other men were without even small and unsavoury nuts raised doubts in her mind as to his real nature. He then beckoned to her and repeated his previous assurances. Buti then approached closer to him and he handed her a large bunch of betel-nut. Her doubts were now dispelled. She realized that he was a *gesges* and then and there succumbed to his advances.

On returning home she hid the bunch of betel-nut and did not pay a visit to the place where she met the *gesges* until three days had passed. It was dusk when she met him again and on this occasion he brought her two bunches of betel-nut and two coconuts. After embracing the *gesges*, Buti asked him what he was called and he answered, "Rangunma:li." She spent the night with him and did not return home till mid-morning of the next day.

Her husband visited her in the women's house and was amazed at the sight of the large bunches of betel-nut which Buti no longer attempted to conceal from him. She told him that a *gesges* had had intercourse with her and had given her the betel-nut in payment for favours received. Siwomberber was not angry with his wife, since he was convinced that the young man who had lain with her was no ordinary human being. He suspected at first that he was a man of influence from the eastern end of the island who had access to betel-nut.

One afternoon during the following week, Rangunma:li came down to Buti's house at Lop in search of her. Whilst engaged in conversation with Buti, he caught sight of Siwomberber approaching the house and was afraid that Buti's husband would attack him. Buti told him that her husband was not angry with him at all, so long as he continued to bring her presents of food and betel-nut. The *gesges* then gave her two coconuts, a large bunch of betel-nut and one large, over-ripe banana and told her that she and her husband must eat the large banana.[9]

By this time, the story of Buti's encounter with a *gesges* had spread throughout the western end of the island but few believed in the truth of the story. Buti was scoffed

[7] Both Tara and Madas are the most malevolent spirits known to the Tanga.

[8] The largest clan on the island.

[9] I have no clue as to the significance of this gift of an over-ripe banana but the acceptance by a woman of food and betel nut from a man in Tanga is highly significant. It means that two such people are acknowledged lovers. The first indication that a marriage has been consummated in Tanga is afforded by the newly wedded pair eating a common meal in public.

at as a liar. In order to clear her name, she asked Rangunma:li if he would reveal himself to the people of Buel, Lop and Lufunfat. He readily consented and straight away went up to a place in Lop Faf called Matamfiu and there revealed himself to all who wished to come and see him. Siwomberber sent messengers bearing large betel-nuts to each of the chieftains on the island with an invitation to come to Matamfiu and look upon the *gesges*.

At this time, a *fasambo* man was erecting a funeral house at Piglingfunkomo in honour of a recently deceased member of his family. When Buti told the *gesges* about the funeral house, he immediately announced : " This house shall be my funeral house and I shall walk the roof."[10] As soon as the house was finished, Buti and the *gesges* occupied it and Buti's husband agreed to sleep beside his gardens at Lufunfat so as not to disturb her and Rangunma:li, who now spent his days at Lop and his nights at Linafa:m. Many men came to Lop in order to look upon the *gesges* but Buti lied to them, saying that he had gone away.

One evening, Rangunma:li overstayed his time with Buti and whilst hurrying through the jungle to Linafa:m, stumbled over a projecting stump of bamboo in the darkness and cut his foot. The foot swelled up and partially lamed him. On the afternoon of the following day, he limped back to Buti and told her that such injuries were fatal to *gesges*. He then took his final leave of Buti and was seen no more.[11]

At the conclusion of this legend, Sulufkorofe decided to risk the trip to Tefa and I had to wait until we had arrived among our southern friends before he would tell us another legend. This time his story concerned certain curious stone dividing fences, relics of which still defy the encroaching jungles of Tanga.

It appears that in times gone by, even before the days of Sulufkorofe's grandfather, the people of Tanga used slabs of fossilized coral and igneous rock (on the volcanic islands of the group) with which to build pig-proof fences around their gardens and family settlements. My informant pointed out to me that it was much easier to use stone for this purpose than to hack laboriously at clumps of bamboo with clam-shell axes in order to gather sufficient stakes for the family stockade. With the coming of steel tools, of course, the position was reversed. However, the seaward ends of all boundaries between beach settlements still consist of strongly bonded walls of slab coral.

Here follows Sulufkorofe's legend of Tuptup and his Two Grandsons :

Several generations ago, there lived on Boieng a man named Tuptup, his wife and two young grandsons. During the season when land had to be cleared for garden making, Tuptup and the two boys used to leave their house each morning and work at preparing the land for the new crops. The two boys worked hard at clearing the area but Tuptup spent all his time making long stone fences.

On visiting the garden site, Tuptup's wife was surprised at the slow progress being made by the working party and asked her husband why the work went so slowly. He told her that the two lads were very lazy and played and sang all day long instead of

[10] For an explanation of this remark and the mechanics of the funeral rite in Tanga, see my " Death in Tanga," *Oceania*, Vol. VII, pp. 316-339.

[11] The ethnographer met Siwomberber and had as a close neighbour one of his sons—Rangunma:li. Buti had died many years ago.

clearing away the scrub. On hearing this, she became very angry but did not openly charge her grandsons with wasting their time in the jungle. She continued to prepare food for the three of them but the two portions which she set aside for the boys she befouled by making water on them.

As soon as the boys tasted their food, they knew that it had been befouled but did not accuse their grandmother of spoiling it. They merely threw it away and the next morning went off to the gardens and worked hard all day. However, when they discovered that their next meal had been similarly befouled, they asked their grandmother why she was giving them bad food. She then told them that Tuptup was getting good food because he really worked hard in the garden all day instead of singing and playing. If they wished to eat good food, they too must work.

The boys then began to sing the following song and walked off in the direction of Bahtkon with their dog.

Tuk/tuk/i fefaim/kumage/kuma:t

Tuk !/Tuk !/Work is being done/by us two here/, by us two only,

Tuk/tuk/i fefaim/tuk/tuk.

Tuk !/Tuk !/Work is being done. /Tuk !/Tuk !

They came to a tall cliff near Bahtkon and there sat down with their dog. They were turned into stone and may be seen to this day standing out in clear outline against the northern horizon. Likewise, the stone fences made by Tuptup may be seen all over this part of the island.

When I told Funmatbau that Sulufkorofe had given me the *gesges* legend, he was prompted to tell me how his well-renowned father, Makosofu, took vengeance upon this same Sulufkorofe.

F. L. S. Bell.

(To be continued).

Australia: Archæology. **Campbell and Walsh.**

Notes on Aboriginal Camp Sites on Yorke Peninsula, South Australia. *By T. D. Campbell, D.D.S., and G. D. Walsh.*

During May, 1946, the writers visited Ardrossan, a township on the east coast of Yorke Peninsula, South Australia,[1] to examine a number of camp sites in the district. The country is intensively cultivated, generally to within close proximity of the coastline, which is bounded in places by low eroded cliffs of Pleistocene or Recent clays and alluvium; elsewhere, low alluvial flats extend for some distance between the littoral sand dunes and the higher ground. Apart from the low shore dunes, sandhills of any appreciable size, which so often form sheltered locations for Aboriginal camp-sites, are rare. The countryside in general has been extensively cleared of the mallee vegetation suite which appears to have been the predominant growth over much of this Peninsula.

Description of Camp-sites Examined.

YP.1, situated in Section 31W, Hundred of Cunningham.

This is an eroded windswept area presenting, in its present condition, a rather unfavourable aspect for a camp-site. It occupies the brow of a hill, is exposed to the prevailing winds, and gives no indications of having had protection or convenient fresh-water supplies. Chippings, mostly chert, are scattered over the area. There are also some dispersed, burnt stone hearth remnants. Only a few implements of interest were collected, the most important being a well-formed *pirri* made from a flake of siliceous mudstone.

YP.2, situated in Section F.2, Hundred of Cunningham.

This is a camp area of limited size, situated near Tiddy Widdy, about two miles along the coast north-east of Ardrossan. It is associated with a few low sand dunes on an alluvial flat near the shore. Here a few trimmed pieces were collected; other features of interest being the number of anvil stones occurring on this small area and the large quantities of broken fragments of marsupial bones, probably one of the smaller kangaroos or wallaby.

YP.3, situated in the vicinity of Section 152, Hundred of Kilkerran.

A visit was made, via Maitland, to the opposite coast of the Peninsula to a locality known as Chinaman's Hut. Here occur some coastal sand hills of large size and among these were found definite indications of Aboriginal occupation. Owing to this area being covered with loose drift sand, very few chipped implements of interest were found but, here again, pounding stones were much in evidence.

YP.4, situated at Koolywurtie or Black Point.[2]

This shore prominence is about sixteen miles down the coast south of Ardrossan, and figures on the Hundred map as portions of Block C and Section 6. This site more than compensated for the somewhat sparse interest of the other sites examined. It is a typical coastal camp-site with its sheltering sandhills, ready water supplies in the adjacent depressions, and the locality has always been known as one of the best fishing areas along this portion of

[1] See inset on Plate AE.

[2] The sketch plan in Plate AE shows the general situation of the camp areas of the Koolywurtie site, with the features of its surrounding topography.

the Peninsula coast. The previously wooded country near by, no doubt provided a source of animal food supply.

On two ridges in this area there is ample evidence of previous Aboriginal occupation. On one camp area at C, in the C-D ridge in the sketch plan, were scattered stone chippings, dispersed hearth stones, some pounding stones and several exposures of disintegrating skeletons.[3] The more imposing area consists of the ridge A-B, which is about half a mile in length and presented abundant evidence in the form of vast quantities of trimmed and untrimmed flakes and chippings, mostly of chert and quartz, scattered hearth remnants, pounding stones and percuters and exposed and broken remains of a number of skeletons. It is also interesting to note that the first white settlers in this locality built their homestead on this ridge and, besides the tumbled remains of a stone house and a few exotic trees, reminders of this white occupation in the form of glass and china fragments, pieces of rusted fencing wire, scraps of buckles and ironware lie strewn about amidst the handiwork of the Aborigines who must have left their home on this ridge close on one hundred years ago.

Among the native archæological relics were found a rich supply of stone implements including many finely worked microlithic types. The specimens taken from this particular site constitute the bulk of the trimmed implements gathered during the trip. As has often been observed on many camp-sites where microliths occur in any quantity, here again they were found in concentrations on certain portions of the strewn area. As with the other camp-sites examined in this district, pounding and anvil stones were relatively plentiful. Numerous pieces of ochre, occurring in a range of bright red, brown and yellow colours, were also observed among the scattered material.

Nature of the Material Collected.

The majority of the stone implements collected came from the Black Point site. From the table given below, it will be seen that with the exception of the larger forms such as the hammer and pounding tools, most of the implements gathered were of microlithic or moderate sizes. Even those listed as " larger " implements were, on the whole, of small to medium size. This may be due to a paucity of good tractable raw material; those pieces utilized having been subjected to appreciable reduction by constant retrimming. Possibly the wealth of specimens found at Black Point is due to this site obviously having been a favoured camping area, for it certainly gives the impression of being a place of intensive stone industry compared with the other sites visited.

The table below gives a classificatory and census account of the collection made.

Microliths.

Trimmed points.
Symmetrical leaf shape.
Pirries.

Bimarginal trimming; narrow. 20 complete, 8 broken, 14 of quartz..	42
Bimarginal trimming; squat. 3, 1 of quartz	4
One margin trimmed; narrow. 3	3
Biface worked; narrow. 2, 3 of quartz. Squat. 2	7

[3] We have learnt that since our visit the whole area C-D has been wind swept, showing the bare surface of this ridge to be well strewn with implements

ABORIGINAL CAMP SITES, YORKE PENINSULA, S.A.

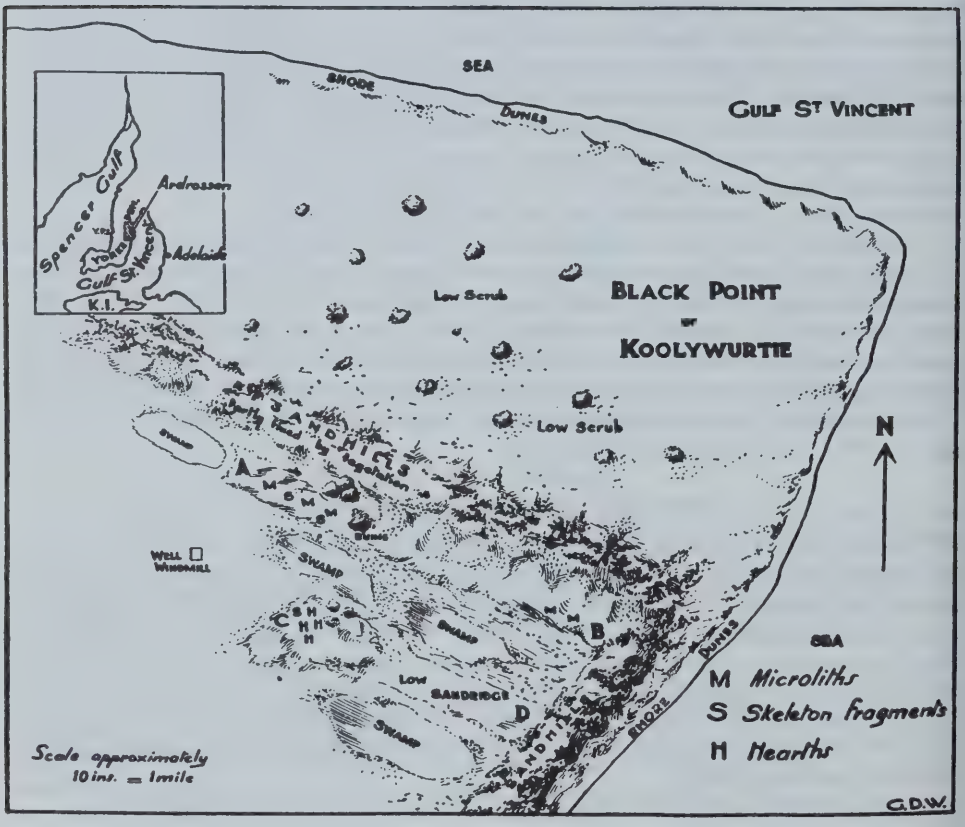

Plate AE.

Abrupt trimmed.
Bimarginal trimming; narrow. 16, 2 broken, 4 of quartz .. 22
Bimarginal trimming; squat. 7 7
One margin trimmed; narrow. 47, also 21 poor or broken .. 68
One margin trimmed; squat. 19, also 16 of quartz 35
Asymmetrical.
Oblique trimmed; squat (Woakwine type). 3, also 3 poor .. 6
Bondi type. 1 (excellent), 13 poor, 1 of quartz 15

Segments.
Ordinary, 19, also 7 of quartz. Ordinary narrow, 2. Rudder, 2 of quartz. Half moon, 8, also 15 quartz. Trapezoid, 6, also 6 of quartz, 1 irregular 66

Discoidal.
Under 2 cms. diam. 13, 4 high. Over 2 cms. diam. 7, 1 of quartz.. .. 25

Semidiscoidal.
Under 2 cms. diam. 19, 11 of quartz. Over 2 cms. diam. 14, 6 of quartz; also high, 7, with 1 of quartz. Biface trimmed, 4 62

Scrapers.
End 8; peaked 3; double-end 2. Concave 2. Carinate 3. Nosed 2. Side 11 (also 5 of quartz). Reduced, *tula*-like flakes 30. "Slugs" 42. Elouera-like 4. Ogival 2 114

Total 376

Larger Implements.

Points.
Symmetrical.
Bimarginal trimming. Narrow ended 6. Squat ended 5. Abrupt trimmed. One margin 9 20
Asymmetrical.
Oblique trimmed (Woakwine type) 1, poor. Bondi type 6, also 11 poor or broken. Large, crudely trimmed 4 22

Discoidal.
High 5, also 1 of quartz. With inverse trimming 2 8

Semidiscoidal.
Ordinary 1, also 2 of quartz. High 3, also 4 of quartz.. 10

Scrapers.
Side 11. Double side 6. End: blades 5, squat 6. Carinate 5. Elouera type 5. Nosed: small 2, broad 1. Concave 1. "Slugs" (4-6 cms.) 29. Tula-like flakes (much reduced) 17. Casual (on irregular pieces, poorly trimmed) 20 108

Blades.
Abrupt trimmed 2 2

Nuclei.
Flake 1 1

Hammer stones.
Small (up to 3 cms.) 4, also 3 of quartz. Medium (up to 6 cms.) 5, also 6 of quartz. Large (approx. 10 cms. and over) generally with broad, abraded pounding margin, 14. Anvil type, with deep pit 12.. .. 44
One grinding stone, with biface low concave ground surfaces 1

Total 213
Grand total 589

It must also be noted that a small collection of untrimmed narrow and squat, leaf-shaped blades has not been included in the above census. Actually only a few representative specimens were collected, but they occurred in large numbers, as is to be expected on a site where the making of " points " was obviously a favoured industry. Four *pirries* which were a little above microlithic size have been included in that group for convenience.

A brief examination of the implements in the South Australian Museum, collected by Mr. J. E. Johnson some years ago in the Moonta-Wallaroo area, showed the following types and are noted here for comparison:

Trimmed symmetrical points: *Pirries*, 40 (mostly of the high mid-ridge type); abrupt trimmed bimarginal, 36; abrupt trimmed, one margin, 41.
Oblique trimmed asymmetrical points (Woakwine type), 1.
Scrapers: End, 3; discoidal, 11; semidiscoidal, 23.
Segments 17.

With a few slightly larger exceptions, all the implements of Johnson's collection are microlithic in size. Thus it will be seen that this collector was apparently attracted by the microlithic forms and his specimens make up a group typographically similar to our small material.

On a previous visit to Yorke Peninsula by one of the present writers (T.D.C.), a few small scrapers and a micro segment were collected from a small sand-blown area at Cape Spencer, the extreme southerly tip of the Peninsula.

Dr. Chas. Fenner has examined the implement collection and states that the majority of the implements are of chert, in a variety of red, yellow and blue-grey colours. He considers that these vari-coloured cherts were undoubtedly carried from some considerable distance. The remainder of the pieces are of quartz (about 17 per cent. as indicated by the totals of the trimmed implements) and a few of quartzite; these latter materials being of more or less local origin.

The pounding and hammer stones, most of which appear to have been primarily flat water-worn pebbles, present a variety of materials, granitic and schistose rocks, quartz and quartzites. Some of the best specimens are of grey silicified mudstones and porphyry.[4]

It is interesting to have found another locality on Yorke Peninsula where finely worked microliths were made in quantities. So far, little systematic collection of implements has been carried out there, apart from the excellent work done some years ago by Mr. J. E. Johnson on sites in the Moonta-Wallaroo area which also produced good examples of the microlithic industry.

[4] The whole collection now forms an addition to the South Australian Museum material.

The number of *pirries* and other trimmed leaf-shape flakes occurring in this region shows that these natives appreciated and made use of the worked point as an implement. The specific use to which all these various points were applied remains here, as in so many other localities, a matter of some uncertainty. The larger sizes might well have been used as spearheads.

Another point of interest is the number of tools generally called " slugs." Many of the smaller sizes of these scraping implements appear similar to those known as the small " reduced " *tula* flakes, but there is an obvious difference in that with the slugs the platform remnant and bulb area are trimmed away, also the slug is often pointed and does not present the curved inner face of the reduced *tula* flake. These slugs are no doubt the reduced bulk of a primarily larger form of tool and their much trimmed condition probably indicates a scarcity of good material.

Another indication that good material for flaking and trimming implements was probably scarce or supplies obtainable only from a distance, is shown by the number of tools made from quartz : over one hundred out of a total of approximately six hundred specimens. With many of the quartz tools, considerable care had been devoted to their shaping and trimming, definitely a sign of making the best of a particularly intractable material. This is specially seen in some of the quartz *pirries*. Besides the use of the usual small waterworn pebbles as hammer stones, these Aborigines were partial to the usage of lumps of quartz for the same purpose. These latter generally ranged from the bulk of an egg to that of a tennis ball and the usually rough angular outlines of the quartz have been abraded into relatively smooth rounded surfaces.

It is also of interest to note that concave scrapers were exceedingly scarce, and the relatively few examples, and poor at that, of oblique trimmed points of the Bondi and Woakwine type found among these implements show that in distinction to the lower Gambier Region[5] of South Australia the Aborigines of this Peninsula were not appreciative of or were unacquainted with, the particular technique applicable to those intriguing types of trimmed point. Possibly the lack of ample supplies of suitable material such as flint, which occurs so abundantly in the southernmost part of the State, was a significant factor. However, the Peninsula natives were obviously acquainted with a technique for knapping and trimming points, as is shown by their fondness for *pirries* and other trimmed leaf-shaped points and by the skill with which they made such excellent examples even from such poor quality material as quartz.

Conclusion.

Yorke Peninsula constitutes an interesting geographical region, but little has been published concerning its Aboriginal inhabitants. Papers or references by Sutton,[6] Howitt,[7] Curr[8] and Tindale[9] deal mainly with native legends and vocabulary.

[5] The new and recently published name " Gambier Region " is here adopted in place of the long-used term Lower South-East.

[6] T. M. Sutton, " The Adjahdurah Tribe of Aborigines on Yorke's Peninsula," *Proc. of Geog. Soc. of Aust., S.A. Branch*, 1889.

[7] A. W. Howitt, *Native Tribes of South East Australia*, 1904, p. 67.

[8] E. M. Curr, *The Australian Race*, Vol. III, p. 143, 1886.

[9] N. B. Tindale, " Notes on Natives of the Southern Portion of Yorke Peninsula, S.A.", *Trans. Roy. Soc. S. Aust.*, Vol. LX, p. 55, 1936.

The visit described herein involved only a limited portion of the Peninsula, so that little can be said concerning its general topography as this may have affected the Aboriginal population and its distribution. One important feature of the region is the somewhat elevated land forming its "backbone." This latter consists of fundamental rocks which are on the surface or at a shallow depth. Excepting in certain local depressions, ground water is scarce. It is along the coastal margin that water supplies are most easily obtainable. This factor, together with the nature, number and distribution of the camp-sites so far studied, which occur along the coast, suggest that the Aboriginal population was never a very large one. Fowler, who, with Kuhn, was Curr's informant and lived on the Peninsula in the early days of settlement, stated that this country was first occupied by white settlers about 1847 and he believed the Aboriginal population to be about 500, and that ". . . it was reduced to about half that number when he first became acquainted with the locality in 1856. In 1880 . . . the tribe numbered less than 100 souls." This seems to indicate a somewhat sparse original density for an area now constituting two counties.

In general, the Peninsula is a region of good average rainfall, 15 to 20 inches per year, and is now fairly densely populated by white folk. It is also of high productivity, as is shown by the large and intensive agricultural acreage. Against this is the fact that the typical indigenous vegetation consisted, prior to clearing, of the mallee suite, which does not suggest a particularly productive terrain for natural food supplies. The vegetation of the southernmost portion of the Peninsula was somewhat different and may have been more favourable for food sources.

Mr. Wheare informs us that years ago the Black Point area, now showing much drift sand, was covered with low scrub, mallee, tea-tree and broom. About 25 years ago this vegetation was cleared, resulting in sand-drift, the exposure of native camp areas and relics, and the building up of adjacent sandhills. He remembers when the Black Point vicinity possessed oyster beds which were dredged about 1890 for several months and produced large supplies of oysters. He also claims that the swamps in evidence during our visit[10] represent only the second such collection of water since 1889, but shallow wells and soakages probably provided ready sources of water for the Aborigines.

A more extensive and intensive study of remaining camp-site remnants on the Peninsula and the topographical features of earlier times would no doubt give a more adequate impression of the original Aboriginal numbers.

The writers are much indebted to the Board and Director of the South Australian Museum for assistance in this field work; to Mr. E. T. Wheare of Ardrossan, Yorke Peninsula, for his generous help during our visit; and to Dr. Chas. Fenner, who was also a member of the party and who assisted in the collecting and suggested the notes herein regarding the nature and source of the material used for the implements; and to Professor J. G. Wood for suggestions concerning the indigenous vegetation.

T. D. Campbell.
G. D. Walsh.

[11] See Plate AE.

PROCEEDINGS OF SOCIETIES:

Annual Report of the Anthropological Society of Victoria, 1946. ***Summary of the report delivered at the annual meeting of the Society, 14th August, 1946.***

The Committee has pleasure in submitting to members the twelfth annual report covering activities for the year ended 30th June, 1946.

Membership.

Our membership now stands at ninety-one, including six life members and one honorary member, twenty-one new members being enrolled during the current year. The steady increase in membership is very heartening, but we still require many more members to attain our pre-war strength. It is believed that many ex-servicemen who came into contact with native peoples during their service in Australia and overseas will be desirous of joining the Society in order to further their knowledge of such peoples, and efforts will be made to contact these men through various unit organizations.

Finances.

As confirmed by the treasurer's report, the finances and assets of the Society remain in a satisfactory state for the current activities of the Society; if any increased activities are to be carried out, however, serious consideration should be given to raising the subscription accordingly. The annual subscription, it will be remembered, was lowered during the war from 7/6 to 5/-.

"Mankind."

One issue of the journal MANKIND was published during the year. The editor has again appealed for contributions from our Society, and members are invited to submit articles for publication.

Meetings.

During the year the following meetings were held:

1945—

August 8.—Eleventh Annual Meeting, at which reports were submitted, officers elected and a lecture entitled "The Sociology of the Groote Eylandt Aborigines" was delivered by Mr. F. Rose.

October 3.—52nd Ordinary Meeting. An illustrated lecture entitled "Among the Aruntas and A'Luritjas" was given by Mr. E. Kramer.

1946—

May 1.—53rd Ordinary Meeting. Dr. F. A. Singleton delivered an address entitled "The Geological History of Mankind."

Excursions.

In lieu of an ordinary meeting, an excursion to the ethnological collection at the National Museum was held in the evening of March 13, 1946. Mr. S. R. Mitchell gave an interesting talk on the collection of native weapons and implements, and Mr. G. Hyam discussed the various native foods exhibited.

In conjunction with the Field Naturalists' Club of Victoria, the Society participated in an excursion to Keilor on March 23, 1946, to view the site where the Keilor skull was found. Mr. R. A. Keeble, who has been actively associated with the investigations with regard to the antiquity of the skull, gave an interesting talk on the circumstances surrounding its discovery, and the method by which he calculated its antiquity.

With the easing of transport difficulties, it is hoped that excursions to places of anthropological interest further afield will be possible in the future, and members are asked to co-operate with the committee in this regard so as to ensure their success.

Committee Meetings.

Four committee meetings were held during the year, at each of which the attendance of committeemen was excellent.

Secretary.

Owing to pressure of work the honorary secretary, Mr. E. E. Lord, tendered his resignation as secretary on January 23, 1946, and Mr. R. Seeger agreed to carry on as acting honorary secretary till the end of the year. It is desired to place on record the Society's indebtedness to Mr. Lord for the services rendered by him during his term in office.

Illness of Mr. R. H. Croll.

Members will be gratified to learn that Mr. R. H. Croll, one of our esteemed committeemen, is slowly recovering from a serious illness which prevented him taking an active part in the affairs of the Society during the year.

Activities.

Acting on advice received by Mr. F. Rose with regard to a proposal of the Australian Government to establish a half-caste settlement on Groote Eylandt, the committee initiated enquiries to ascertain the facts. Subsequent investigations revealed that the proposal has been dropped and that the flying boat base on the island was to be converted into an aboriginal hospital.

The question of utilizing the McDowell Bequest has also received attention, and affiliated societies have been circularized with a view to obtaining their views as to the most beneficial manner of disposing of the money.

At the Science Conference held in Adelaide, the Society was represented by Mr. S. R. Mitchell.

Acknowledgments.

The Committee tenders its thanks to Mr. W. Howitt, who kindly made his office available to the Society for the purpose of holding committee meetings. With the introduction of lighting restrictions, however, the Committee could not avail itself of Mr. Howitt's generosity, and the Trustees of the Public Library made a room at the library available to the Committee. The Committee desires to record its gratitude to the Trustees for this facility.

In conclusion, this report would be incomplete were the sterling services of the President, Mr. G. Hyam, not mentioned. By his active participation in all matters pertaining to the Society during his term of office, he has shown that he has the interest of the Society at heart, and deserves, thereby, the wholehearted thanks of the members.

REVIEWS

Smoking and Tobacco in New Guinea. *By A. C. Haddon, Sc.D., F.R.S. Philosophical Transactions of the Royal Society of London, Series B, Vol. 232, 278 pp., 198 figs., map.*

The task of reducing even one aspect of the material culture of the Oceanic region to monograph form is a stupendous one, and it is only now and again that works of the kind under review appear. Professor Haddon's work in Melanesia has already produced those splendid volumes on the ethnography of the Torres Strait and the watercraft of the Pacific region. In the present monograph he deals in a masterly manner with the custom of smoking in New Guinea, and the work is unique in that it covers a definite period of time, extending from the early sixteenth century to 1939. This time period is a valuable illustration of the part played by diffusion in the history of Pacific peoples, as a glance at the extraordinarily wide distribution of the custom amongst them will demonstrate. The author assumes that smoking was brought from the Americas to the Philippines by either Portuguese or Spaniards during the sixteenth century, and he discusses in detail the early European contacts with New Guinea. From botanical samples collected in various parts of New Guinea he has established that the species cultivated by the natives is the ordinary commercial *N. tabacum*, although other species grow wild on the island.

Part I deals with the methods of smoking cigarettes, bamboo and other pipes, and includes a description of the art motifs on the latter. Part II, the main part of the work, is a description of tobacco pipes from Papua, Mandated Territory of New Guinea, and Netherlands New Guinea, with remarks on their relationships. The suggestion is made that the wooden pipes from the Arfak Mountains are possibly related to the water-pipes of India. Part III contains many sections, including the historical review, a denial of Wiener's claim that smoking spread from North America in 1448 to Africa and thence to Europe, lists of names of tobacco and pipes in which it is shown that many of the native terms are modifications of Dutch and Spanish terms, and a discussion of the social value of smoking in New Guinea.

In retrospect the author summarizes Parts I-III, and discusses the origins of several New Guinea tribes and their cultures. The hypothesis is adopted that the cultivation of tobacco spread from the north-west to the south-east of New Guinea along the main and subsidiary mountain ranges, whence in many places it extended by secondary spreads to the plains or even to the coast along the recognized trade routes. The bibliography ends at 1939.

F. D. McCarthy.

The Stone Implements of Australia. *By F. D. McCarthy, Dip.Anthr. (Syd.), assisted by E. Bramell, M.A., Dip.Ed., and H. V. V. Noone. Australian Museum Memoir IX. Sydney, 1946.* 94 pp., 386 illus. 9/-.

This important monograph on the classification of Australian Aboriginal stone implements fills a need which rapidly passing years and ever-increasing collections have long demanded. Mr. McCarthy has provided us with a most complete survey of the subject which consists of (i) introduction in which such matters as the work of previous writers, systems of classification, nomenclature, material and techniques, and suggested lines of research are discussed, (ii) the classification, (iii) general description of types with full synonymy and list of references to each kind, (iv) glossary of definitions, and (v) bibliography.

The basic terminology adopted is sound but it is to be hoped that, as this problem of classification develops, a too free usage of foreign or even Aboriginal names will be guarded against, since they often have little meaning and merely add to the confusion. In emphasizing the tremendous importance of marking and registering each specimen clearly and adequately, an example of a good type of recording card would have been a useful guide to collectors and an aid towards standardization of data and method.

The author of this review has but one fault to find with this publication, its weak typographical set-up, due no doubt to misguided financial economy. For the not so expert student, and a good deal of useful collecting depends on the work of keen amateurs, a more spacious and better lay-out of the various sections and clearer printing of some of the illustrations, especially the half-tone blocks, would have improved this publication. The work of that keen enthusiast the late Dr. George Horne does not find a place in the Introduction, although his name appears in the Bibliography. Again, it was Stapleton, not Campbell, who was responsible for applying the term " Buandik biface " to certain flint coroids.

This study has entailed a painstaking and exhaustive analysis of all the available material and the extensive bibliography is an exceedingly valuable inclusion. As the author wisely claims, it forms a useful, tentative working basis for further study and effort towards a standard classification and description of our Australian stone implements. Such a publication, together with the fortunately growing and closer co-operation among Australian workers, must lead to sound and progressive results.

T. D. CAMPBELL.

CORRESPONDENCE, NOTES AND NEWS:

Grant in Aid of Publication of "Mankind."

In January of this year the Council of the Anthropological Society of New South Wales made an application to the Government of New South Wales for a grant-in-aid of publication of MANKIND. The application was submitted to the Hon. R. J. Heffron, Minister for Public Instruction, through the good offices of one of its members, the Hon. E. G. Wright, M.L.C. On the 3rd of April the following reply was received from the Minister:

Hon. E. G. Wright, M.L.C.,
Parliament House,
Sydney.

Dear Mr. Wright,

Further to my letter of 14th February, I desire to inform you that I have given close consideration to the facts contained in the letter submitted to you by Professor A. P. Elkin, and I have submitted to the Hon. the Premier the request that provision be made for an annual grant-in-aid of the Society commencing from the financial year 1946-47.

Yours faithfully,
R. J. HEFFRON,
Minister for Public Instruction.

Commonwealth Literary Fund Fellowship.

It is pleasing to note that of the Fellowships granted during 1946 two were awarded to members of the Australian Anthropological Association. Both Mr. A. O. Neville (N.S.W.) and Mr. C. P. Mountford (S.A.) have each received grants of £400 to assist them in the preparation of books on Australia and its Aboriginal inhabitants.